

U.S.S.N. 10/628,610

CLAIMS:

Listing of the claims:

1. (Original) A method of charging a battery, the method comprising the steps of:
 - a. monitoring a temperature of at least one rechargeable cell disposed within the battery;
 - b. monitoring an amount of energy stored within the at least one rechargeable cell;
 - c. monitoring time when both the temperature exceeds a predetermined temperature threshold and the amount of energy stored exceeds a predetermined capacity threshold; and
 - d. reducing the amount of energy stored within the at least one rechargeable cell when both the temperature exceeds the predetermined temperature threshold and the amount of energy stored exceeds the predetermined capacity threshold for at least a continuous, predetermined amount of time.
2. (Original) The method of step 1, wherein the monitoring the amount of energy is accomplished by a method selected from the group consisting of measuring a voltage across the at least one rechargeable cell and reading a fuel gauge.
3. (Original) The method of step 2, wherein the monitoring the amount of energy is accomplished by measuring a voltage across the at least one rechargeable cell, further wherein the predetermined capacity threshold comprises a voltage of at least 4.1 V across the at least one rechargeable cell.

U.S.S.N. 10/628,610

4. (Original) The method of claim 3, wherein the reducing the amount of energy comprises discharging the at least one rechargeable cell until the voltage across the cell is at least 50 mV below the predetermined capacity threshold.
5. (Original) The method of claim 1, wherein the predetermined temperature threshold is at least 55 degrees centigrade.
6. (Original) The method of claim 1, wherein the reducing the amount of energy comprises a reduction of at least 1 per cent of a maximum energy capacity of the at least one rechargeable cell.
7. (Original) The method of claim 1, further comprising the step of prompting a user prior to the reducing the amount of energy.
8. (Original) The method of claim 7, further comprising the step of waiting at least a predetermined wait time as directed by a user prior to the reducing the amount of energy.
9. (Original) The method of claim 1, wherein the predetermined amount of time is at least 10 hours.
10. (Original) A method of charging a rechargeable, electrochemical cell, the method comprising the steps of:
 - a. providing a battery pack comprising at least one electrochemical cell;
 - b. providing a processor capable of measuring a temperature and a voltage of the at least one electrochemical cell, the processor further being able of measuring a duration of time;
 - c. monitoring the temperature of at least one electrochemical cell;
 - d. monitoring the voltage of the at least one electrochemical cell;

U.S.S.N. 10/628,610

- c. monitoring time when both the temperature exceeds a predetermined temperature threshold and the voltage exceeds a predetermined voltage threshold; and
 - f. reducing an amount of energy stored within the at least one electrochemical cell by at least one percent when both the temperature exceeds the predetermined temperature threshold and the voltage exceeds the predetermined voltage threshold for at least a continuous, predetermined amount of time.
- 11. (Original) The method of step 10, wherein the predetermined voltage threshold comprises a voltage of at least 4.1 V across the at least one electrochemical cell.
- 12. (Original) The method of claim 11, wherein the reducing the amount of energy comprises discharging the at least one electrochemical cell until the voltage across the cell is at least 50 mV below the predetermined voltage threshold.
- 13. (Original) The method of claim 10, wherein the predetermined temperature threshold is at least 55° centigrade.
- 14. (Original) The method of claim 10, further comprising the step of prompting a user prior to reducing the amount of energy.
- 15. (Original) The method of claim 14, further comprising the step of waiting at least a predetermined wait time as directed by a user prior to reducing the amount of energy.
- 16. (Original) The method of claim 10, wherein the predetermined amount of time is at least 10 hours.